State of Rhode Island and Providence Plantations.

FORTY-THIRD ANNUAL REPORT

OF THE

COMMISSIONERS OF INLAND FISHERIES,

MADE TO THE

GENERAL ASSEMBLY

AT ITS

January Session, 1913.

PROVIDENCE:
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1913.

COMMISSIONERS OF INLAND FISHERIES.

CHARLES W. WILLARD, Westerly, *President.*
DANIEL B. FEARING, A. M., Newport, *Vice President.*
WILLIAM H. BOARDMAN, Central Falls, *Secretary.*
ADELBERT D. ROBERTS, Woonsocket, *Auditor.*
THEOPHILE GUERIN, Woonsocket, *Treasurer.*
WILLIAM P. MORTON, Providence.
ISAAC H. CLARKE, Jamestown.

DEPUTY COMMISSIONERS.

WILLIAM T. LUTH, Newport, *Chief Deputy.*
JAMES HARRINGTON, Newport.
J. B. ALLEN, New Shoreham.
A. V. WILLIS, New Shoreham.

SUPERINTENDENT OF HATCHERY AND EXPERIMENT STATION.

EARNEST W. BARNES, Wickford.

REPORT.

To the Honorable the General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1913:

The Commissioners herewith, present their forty-third annual report, for the year 1912, which contains as required by law, data and statistics with the respect to the fisheries under their jurisdiction and such recommendation as they deem expedient.

Your Commissioners desire at the very commencement of this report to thank the members of the Assembly for their liberal support of this branch of the State's work. The appropriation of 1912 enabled them, in addition to the regular line of work, to do the considerable repair work at the Wickford Hatchery and Experiment Station, which was made necessary by the lack of appropriation for the preceding year, and also to construct a suitable wharf and building —a thing which has been needed at the Station for a number of years and had now become quite imperative.

A suitable site for a black bass hatchery has been sought and two or three locations are now being considered.

Arrangements have been made to commence in the early part of this year, 1913, a survey of the enumerable fresh-water ponds in the State with a view of determining the kind of fish for which they are best adapted and then to endeavor to keep them well stocked.

In addition to the above, the work of the Commission has followed the usual lines and may be briefly mentioned as follows:

The enforcement of the laws respecting fresh-water fishes.

The purchase of egg bearing lobsters as required by Chapter 595 of the Public Laws of 1909.

Employment of deputies to enforce the lobster laws.

The rearing of lobsters to the bottom-seeking stage—525,000 lobsterlings, in round numbers, were thus reared in 1912.

The gathering of data and statistics with respect to the food fishes.

The coöperation with fisheries authorities of neighboring states and abroad.

The distribution of literature and information to the public for the development and encouragement of the fisheries.

Occasion is here taken to thank the New York, New Haven & Hartford Railroad Company for its courtesy in granting free transportation of fry and messengers.

The financial statement for the year 1912 is as follows:

State of Rhode Island in account with the Commissioners of Inland Fisheries.

DEBIT.

1912.		
May 5.	To expenses of the Commissioners in maintaining the various departments of their work from March 15 to December 31, 1911*.....	$9,039 02
Dec. 31.	To expenses of the Commissioners from January 1 to December 31, 1912.....	1,665 50
	To expenses and services of deputies under the law from January 1 to December 31, 1912..	3,790 40
	To expenses at the Wickford hatchery and Experiment Station, January 1 to December 31, 1912.....	8,693 12
		$23,188 04

*It was during this period that the Commission was without funds but was able to carry on a somewhat restricted amount of its work because of personal financial support by certain of its members.

CREDIT.

1912.

Dec. 31. By received from the State Treasurer..... $23,188 04

Amount received for 273 lobster licenses, at $5.00 each, as per receipts from the State Treasurer... $1,365 00

Respectfully submitted,

CHAS. W. WILLARD,
DANIEL B. FEARING,
WILLIAM H. BOARDMAN,
ADELBERT ROBERTS,
THEOPHILE GUERIN,
WM. P. MORTON,
ISAAC H. CLARKE.

STOCKING FRESH-WATER PONDS AND STREAMS.

Owing to the protracted drought in the summer of 1912, the streams and ponds throughout the State were very low and for this reason your Commission did not deem it advisable to expend much money in distributing trout and other fresh-water fishes. But late in the fall after the commencement of liberal rains a number of trout were secured and carefully distributed during the open winter.

The Commissioners take great pleasure in noting a revival of interest in the fresh-water fishes on the part of citizens of the State, as evidenced by the large number of communications which were received through the year. This revival is not confined to this State, but is wide-spread throughout the country. In Kansas, the State has, at great expense, constructed a mammoth hatchery capable of furnishing a great quantity of young fishes. Nearer home, Massachusetts is erecting large black bass and trout hatcheries.

In response to this demand your Commission has decided to give greater prominence to the fresh-water stocking. The ponds and streams of the State which are capable of supporting fish life are numerous and varied. In order, therefore, that the fewest mistakes may be made and the greatest good accomplished in stocking these fresh-water areas, a systematic investigation of the ponds and streams of the State has been started. A determination will be made of the kinds of fish contained and the possibility of further stocking them with both food and game fishes.

In connection with this work, the establishment of a hatchery for the rearing of black bass and a probable extension to the rearing of other fresh-water fishes, has been undertaken.

With the inauguration of these methods your Commission hopes to be able to accomplish more in the development of the fresh-water resources of the State. In the past, the efforts of the Commission has proven very successful in a great many cases. Especially noteworthy is the effort to stock the Pawcatuck and its tributaries with large-mouth black bass. One day in last July (1912), a black bass

weighing ten pounds was taken from the Pawcatuck, and the same day another weighing six pounds was also caught. Later on, in September, two, weighing four pounds each, were taken from the same stream near Westerly by Mrs. Robinson. Fish of this size must be at least eight years old.

THE COLLECTION OF DATA AND STATISTICS RELATING TO THE COMMERCIAL FISHERIES.

The gathering of data and statistics relating to the fisheries is one of the most important duties which the General Assembly has assigned to the Commission, furnishing as it does, a basis for the enactment of intelligent fish laws. In order that it may be of the most value, it is quite necessary that the facts and data gathered should cover as great a number of years as possible, and it is obvious that they should be continuous. Every effort has been made to make them reliable, but as mentioned in previous reports, the absence on our statute books of laws making returns compulsory has prevented the data from being complete.

GENERAL CONDITIONS OF THE FISHERIES IN 1912.

In general, the fishing in Narragansett Bay in 1912 was extremely poor. Marketable fish were scarce, and few of the "stub-trap" fishermen made more than enough to clear expenses. Indeed, as one experienced fisherman who had kept close observation on this branch of the fisheries, remarked, fewer single fish were caught this year than formerly barrels of fish had been. The last of May and first part of June there were some good catches of large squiteague, and ordinarily, this would have been considered an omen of a good season, but these fish left and no good catches were made afterwards. Small scup and small butterfish were rather plentiful, and in the absence of sizeable fish, were marketed. Bait fish were quite common. While it is difficult to attribute the poor season to any single cause, it is a note-

worthy fact supported by considerable evidence that beginning in the upper part of the Bay with the gradual extension of the oyster beds, the fishing has correspondingly diminished.

Hand-lining within the Bay was also poor. Off Newport the hand-liners were handicapped by unusually stormy weather, but when the weather permitted, the catches were good. Off-shore trappers reported that the fishing was below the average except for scup, which were more abundant than for a number of years.

The following tables of the shipment of sea products from Newport are submitted as heretofore, and while they show a gain in the amount of fish shipped, this is due almost entirely to the large run of scup.

TABLE I.

Table Showing the Amount of Fish, Lobsters, and Other Sea Products Shipped Monthly from Newport by the Principal Transportation Companies During the Year 1912.

1912	Barrels of Fish.	Barrels of Lobsters.	Barrels of Crabs.	Barrels of Oysters.	Number of Sturgeon.	Barrels of Horsemackerel.	Number of Sharks.	Barrels of Turtles.	Barrels of Clams.	Number of Swordfish.	Barrels of Sounds.	Barrels of Conches.	Barrels of Mussels.
January	1,594			127									4
February	1,988			118									4
March	873	1		66					15				20
April	785	2		59					1				9
May	14,292	8		13	5	1							
June	14,613	134	3		2	3	6		9	184			
July	5,669	390	2		2	14		1		100			
August	4,370	548	16	4	1	10	7	1		26			
September	4,281	274	10	69		13	1		1	8		8	
October	4,457	106	6	181	1	26	1		2	3		44	
November	2,079	2	1	164	3		1		2			165	
December	1,324			179					3			38	1
Total, year 1912	56,325	1,465	38	980	14	67	16	2	33	321		255	38

Table II.

Table Showing Shipment of Fish, Lobsters, and Other Sea Products from Newport for the last Twenty-Six Years.

	Barrels Fish.	Barrels Lobsters.	Barrels Quahaugs.	Barrels Crabs.	Barrels Clams.	Barrels Spawn.	Barrels Sounds.	Number Sword-fish.	Number Sturgeons.	Number Horse-mackerel.	Barrels Turtles.	Number Sharks.	Number Porpoise.	Barrels Eels.	Barrels Oysters.	Conches.	Mussels.
1887	16,657	834	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1888	15,033	1,161	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1889	19,306	2,047	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1890	8,933	2,650	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1891	18,032	2,204	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1892	26,832	2,123	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1893	24,452	1,399	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1894	17,769	2,392	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1895	24,622	2,119	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..
1896	20,425	1,728	...	...	...	...	...	143	...	...	...	...	...	...	...	...	..
1897	52,098	2,039	...	...	...	...	...	45	...	...	...	...	...	...	...	...	..
1898	34,065	1,163	...	...	...	...	...	74	...	...	...	...	...	...	...	...	..
1899	34,917	4,143	...	...	...	...	...	162	...	...	...	...	...	...	...	...	..
1900	38,184	4,793	...	...	...	...	...	166	...	...	...	...	...	...	...	...	..
1901	50,500	4,393	...	...	...	...	...	21	...	...	...	...	...	...	...	...	..
1902	53,986	4,342	...	1	...	...	...	179	...	...	...	...	...	...	...	...	..
1903	54,384	1,474	...	84	...	...	...	164	11	79	...	...	...	18	...	...	..
1904	62,106	1,921	...	45	8	..	...	554	...	336	...	...	...	...	...	...	..
1905	50,127	977	...	122	80	3	23	723	26	91	...	1	1	..	...	...	..
1906	60,955	1,306½	233	17	15	2	6	811	11	40	2	12	1	..	112	...	..
1907	59,674	1,529	...	322	12	8	24	263	13	112	1	12	..	..	18	...	..
1908	48,814	2,517½	...	287	23	..	21	198	3	93	5	3	..	..	...	...	..
1909	46,031	3,252½	...	145	14	..	29	61	6	21	...	5	..	..	673	...	..
1910	53,154	427	...	112	58	..	5	38	17	47	5	37	..	..	794	42	5
1911	39,141	2,281½	...	50	29	..	4	509	56	79	4½	32	..	..	726	71	1
1912	56,325	1,465	...	38	33	..	...	321	14	67	2	16	..	..	980	255	38
Total	986,422	56,691	233	1,223	272	13	112	4,332	157	965	19½	118	2	18	3,303	368	44

THE LOBSTER INDUSTRY.

The total number of pounds of lobsters reported caught in Rhode Island waters was over 140,000 less than in 1911. On the other hand, since the number of pots set had decreased about one-fourth, the average number of pounds per lobster pot increased from 38 to 43. Within the Bay, lobster fishing has shown the same gradual decrease as other branches of fishing, and seems to be due to the increase in the oyster industry.

Small lobsters were reported by the fishermen to have been more abundant, especially in those parts stocked by the Wickford hatchery. Here fish-traps and beam trawls, although with quite large meshed nets, sometimes caught as high as a waterpail full at one haul of the net.

Off Newport and around Point Judith and Block Island the catch of lobsters was reported better than usual, especially from the middle of June to the middle of July. During this period, one firm in two hauls, caught sufficient to net them an ordinary full season's profit.

The following tables have been compiled from data furnished for the greater part by William T. Luth, Chief Deputy Lobster Commissioner, and at the conclusion of these a list of the licensed lobster men is given as prescribed by law:

TABLE III.

Table Comparing the Number of Pounds of Lobsters, Number of Pots, and Average Number of Pounds Per Pot, for the Years 1904–1912.

YEAR.	Total Catch in Pounds.	Newport.	Number of Pots.	Average Number of Pounds Per Pot.
1904	376,994	226,994	7,935	45
1905	449,300	301,659	9,180	48
1906	671,914	353,573	11,355	59
1907	929,423	581,189	12,104	76
1908	1,471,344	665,009	20,011	73
1909	1,342,983	757,837	23,220	57
1910	833,683	489,815	22,091	37
1911	891,886	513,076	23,294	38
1912	745,257	372,726	17,259	43

Table IV.

The Number of Pounds of Lobsters Caught in Rhode Island for the Years 1904–1912.

Fish Markets.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
Newport (wholesale)	147,494	179,427	245,860	472,575	524,746	572,705	351,675	390,702	219,076
Newport (retail)	79,500	122,232	107,713	108,614	100,263	185,132	148,140	132,374	153,650
Sakonnet (wholesale)		97,641	163,341	193,243	191,218	191,731	67,038	63,000	55,618
Tiverton (wholesale)					286,724	91,107	60,785	84,000	49,043
Block Island (wholesale)									
Narragansett Pier (wholesale)	150,000	100,000	155,000	155,000					
Watch Hill (wholesale)									
Point Judith (wholesale)									
Block Island (wholesale)					248,330	236,000	160,300	159,000	196,000
Point Judith (wholesale)									
Watch Hill (wholesale)						66,318	54,800	92,810	71,870
Narragansett Pier (wholesale)									
	376,994	499,300	671,914	929,432	1,351,281	1,342,993	842,738	921,886	745,257

Table V.

Number of Pots, Boats and Men Engaged in Lobster Fishing in the State of Rhode Island for 1912.

Location.	Men.	Boats.	Pots.
Block Island	52	44	5,355
Bristol	10	7	439
Charlestown	3	2	115
East Providence	1	1	25
Hamilton	2	2	140
Jamestown	11	9	630
Middletown	4	4	172
Narragansett Pier	25	20	1,552
Newport	92	83	5,262
Point Judith	13	8	660
Portsmouth	5	5	295
Prudence Island	6	4	200
Sakonnet	17	16	649
Saunderstown	9	6	420
Tiverton	1	1	40
Warren	6	3	320
Westerly	13	12	890
Wickford	3	3	95
Total	273	230	17,259

*In addition to these a few boats were fishing just beyond the three mile limit. The bulk of their lobsters were brought into Rhode Island.

List of Lobster Licenses Granted in 1912.

License No.	Name.	Location.
1.	Joseph L. Eaton	Saunderstown.
2.	Joseph L. Eaton, Jr	"
4.	Victor D. Gray	Tiverton.
5.	Samuel E. Gray	"
6.	William H. Dodge	Block Island.
7.	Louis E. Smith	"
8.	Earle A. Smith	"
10.	Arthur E. Dodge	"
11.	Prentice A. Lanphear	Westerly.
12.	Wilbur E. Dodge	Block Island.
14.	Daniel M. Thompson	Prudence Island.
15.	Albert W. Smith	Block Island.
16.	George Elwood Smith	"
18.	A. C. Littlefield	"
19.	Samuel R. Littlefield, 2d	"
21.	John E. Littlefield	"
22.	Rouse B. Dodge	"
24.	Simeon A. Ball	"
25.	Vernice Willis	"
26.	Johannes Jacobson	"
30.	Howard Fisher	"
32.	Elgin C. Roberts	"
36.	Samuel B. Dickens	"
37.	Archie C. Dickens	"
38.	Albert S. Hayes	"
39.	Edgar Littlefield	"
41.	Andrew Johnson	"
43.	Albert L. Anderson	"
44.	Wilson D. Maine	Westerly.
45.	Gust Anderson	Block Island.
46.	John A. Anderson	"
49.	Christian Francis	Newport.

License No.	Name.	Location.
54.	Park A. Slate	Block Island.
58.	Edward Evensen	"
59.	Dimitrios Kodilis	Newport.
62.	Irving M. Ball	Block Island.
63.	Thaddeus A. Ball	"
65.	Walter R. Littlefield	"
66.	Harold L. Dunn	"
67.	Stanton C. Allen	"
68.	Emery A. Dickens	"
69.	Joshua Smith	"
71.	Abel Edward Allen	"
72.	Eleazer Allen	"
73.	Parker Mitchell	"
74.	Ezra B. Dunn	"
75.	Barzilla B. Dunn	"
77.	Amanuel Allen	"
81.	George Mathinos	Newport.
82.	Lyman Hall	Westerly.
84.	Richard Steadman	Block Island.
85.	Silas C. Hall	"
86.	Charles A. Hall	"
87.	John Sarris*	Newport.
88.	Dimitrios Damascus	"
89.	George Stamatas	"
90.	Oscar T. Dykstra	Wakefield.
91.	Adrian Dykstra	"
92.	Bernal H. Dodge	Block Island.
93.	John A. Papa	Newport.
94.	George F. Tew	"
95.	Walter D. Tew	"
96.	Eugene A. Tew	"
97.	Edward Roy	"

*License revoked.

License No.	Name.	Location.
98.	Stamatios Stamatas	Newport.
99.	Peter Andrews	"
100.	Peter Palmer	"
101.	Perikles Booras	"
102.	John Conisotas	"
103.	Raftakis Raftakis	"
104.	Restcom E. Peabody	Middletown.
105.	Beck Anderson	Newport.
107.	Nicholas Alexander	"
108.	Anthony Mathinos	"
109.	Harry J. Violet	"
110.	John B. King	Jamestown.
111.	John H. Sherman	"
112.	Jerome T. Blount	Newport.
113.	James P. Hennessey	Peacedale.
114.	John Johnson	Newport.
116.	R. G. Burdick	Narragansett Pier.
119.	Nicholas Trocotas	Newport.
120.	George Lathrop	Prudence Island.
121.	George A. Carpenter	Saunderstown.
122.	R. R. Matterson	"
123.	William A. Matterson	"
124.	Archie C. H. Matterson	"
125.	George Frank	Narragansett Pier.
127.	Thomas F. Nickerson	Little Compton.
128.	Israel A. Smith	Providence.
129.	Constantine Mataronas	Newport.
130.	Edgar F. Grinnell	"
131.	Anastacio Angelo	"
133.	Charles Lee Pendleton	Bristol.
134.	Nicholas Julias	Newport.
135.	Lazarus Brown	"
136.	Nicholas Mataronas	"

License No.	Name.	Location.
137.	Domotaris Domotaris	Newport.
138.	Vasilas Hanos	"
139.	Frank Parlenas	"
140.	John Giones	"
141.	John Violet	"
142.	Thomas James	"
144.	Mark J. Violet	"
145.	Steloi J. Palmer	Newport.
146.	Richard Curry	Charlestown.
147.	Sinclair Tucker	Portsmouth.
148.	Felix Morrone	Newport.
150.	Edward N. Lawton	"
151.	Nicholas K. Card	"
152.	Henry C. Bush	Bristol.
153.	Demetrios Giones	Newport.
154.	Vasilas Paris	"
155.	B. A. Kinnecom	Narragansett Pier.
156.	Constantine Conomus	Newport.
157.	William Simmel	Bristol.
160.	George Woviotis	Newport.
161.	Angelo Maniotis	"
163.	George I. Hargraves	Narragansett Pier.
165.	Stamos Salonikas	Newport.
167.	Joseph S. Nones	"
170.	Walter Chace	"
171.	Nicholas Martin	Tiverton.
172.	William H. James	Newport.
178.	Jesse E. Crowell	Bristol.
179.	Manuel Kristodolo	"
180.	Herbert A. Warner	"
181.	Marcus L. Huftalen	Warren.
182.	Fotis Tregonis	Newport.
183.	William C. Allen	Narragansett Pier.

License No.	Name.	Location.
185.	Edward E. Littlefield	Block Island.
187.	Oder S. Dunn	"
190.	O. Arthur Kitchen	Newport.
192.	John B. Grimes	Block Island.
193.	Irving T. Wilcox	Tiverton.
196.	Everett A. Willis	Block Island.
198.	George R. Smith	Wakefield.
199.	Manuel Jacobs	Block Island.
201.	Langworthy H. Pearce, Jr	Narragansett Pier.
203.	Joseph Silvia	Little Compton.
204.	H. Hillyer Burdick	Narragansett Pier.
205.	Walter H. Munro	Warren.
208.	Samuel T. Oatley*	Narragansett Pier.
210.	Fred B. Tucker	"
213.	Henry E. Harvey*	"
214.	Manuel Silviera	Little Compton.
215.	Frank Brown	"
218.	Ernest E. Streeter	Wakefield.
220.	Henry Milton Bundy	Little Compton.
222.	Langworthy H. Pearce	Saunderstown.
225.	William M. Wyatt*	Portsmouth.
226.	William H. Thomas	Newport.
227.	Charles Gross	"
228.	John Taylor	Jamestown.
229.	Andrew F. King	"
230.	Keriakos Paris	Newport.
231.	Antonio R. Medeiros	Middletown.
233.	Patrick McCarthy	Newport.
235.	Procopios Mataronas	"
236.	George Mataronas	"
239.	Robert P. Hall	Westerly.
240.	George M. Nye	"

*License revoked.

License No.	Name.	Location.
241.	Elvin M. Scott	Westerly.
244.	John Whitford	"
245.	Horace E. Sisson	"
246.	Asahel B. Larkin	"
249.	Thomas T. Saunders	"
250.	Edward Andrews	Wickford.
254.	John Espanolia	Newport.
258.	Joseph A. Maytum	Bristol.
260.	E. M. Slate	Block Island.
261.	Fred A. Slate	"
262.	Harry S. Champlin	Narragansett Pier.
263.	Reuben McKenney	"
264.	Thomas W. Rhodes	"
265.	Joshua G. Champlin	"
266.	Henry C. Whaley	"
267.	Alvin O. Gould	"
270.	Horace Tucker	Wakefield.
271.	Charles S. Clarke	Jamestown.
273.	Henry C. Johnson, 2d	Hamilton.
276.	Frank W. Johnson	"
277.	John S. Petritis	Jamestown.
278.	Constantine Frank	Narragansett Pier.
280.	Alfred A. Peckham	Tiverton.
281.	George A. Martin	Newport.
282.	John Mustacas	"
284.	Ellis B. Wilbur	Little Compton.
285.	William F. Freeborn	Portsmouth.
286.	L. Wardsworth	Wickford.
287.	Charles W. Cowles	Newport.
288.	Walter W. Weld	"
289.	Michael Frank	Narragansett Pier.
290.	Joseph C. Silvia	Little Compton.
291.	Willard F. Borden	Tiverton.

License No.	Name.	Location
295.	Nicholas Batlis	Newport.
296.	Martin Thompson	Prudence Island.
297.	Marcus M. Wilcox	Tiverton.
300.	George E. Harris	Jamestown.
302.	John C. Molden	Middletown.
304.	Benjamin Johanson	Newport.
306.	Rudolph Schade	Jamestown.
308.	Edward F. Sweet	Narragansett Pier.
309.	Bernard Murphy	Newport.
313.	William P. Briggs	Narragansett Pier.
316.	Joshua F. Clark	"
317.	Harry D. Clark	"
321.	Nicholas Patritis	Jamestown.
324.	Herbert Wilcox	Charlestown.
325.	Howard P. Wilcox	"
327.	William R. Peckham	East Greenwich.
330.	Thomas Perry George	Jamestown.
331.	Sands Littlefield	Block Island.
332.	Anthony Axiotes	Newport.
334.	Cleveland H. Clarke	Westerly.
340.	Ebenezer Crowell	Conimicut.
344.	Patrick H. Dillon	Wakefield.
347.	Peter Batlis	Newport.
348.	L. C. Luth	"
349.	Charles E. Larkin	Westerly.
352.	Ernest Kellykoudas	Newport.
356.	Gorden Bliven	"
357.	Walter S. H. Bliven	"
358.	Maurice Fleetwood	"
360.	Edwin W. Nash	Watch Hill.
364.	Manuel Ramos	Newport.
367.	James Attmore Wright	Wakefield.
368.	Odessas Booras	Newport.

License No.	Name.	Location.
369.	Daniel McKeon	Newport.
370.	James Skapinakis	"
371.	Thomas Kristodolo	Bristol.
372.	Charles B. Albro	Prudence Island.
373.	William S. Albro	"
374.	Nicholas Skapinakis	Newport.
375.	Anastaso Salonikas	"
378.	Edward M. Harvey	Portsmouth.
380.	John Cauldfield	Tiverton.
381.	William H. Dickerson	Warren.
382.	John C. Dickerson	"
385.	Howard D. Browning	Peacedale.
386.	Leon M. Champlin	Narragansett Pier.
387.	Herbert A. Nichols	Warren.
388.	Christian T. Luth	Newport.
389.	James Collins	"
390.	Martin Hord	"
391.	Alfred J. Gross	"
396.	E. Wilfred Matterson	Saunderstown.
397.	Siderys Siderys	Newport.
401.	George L. Hoxie	"
402.	Pahtelis Petritis	Jamestown.
403.	Math Baker	Newport.
404.	Richard Olsen	Block Island.
405.	Daniel W. Lasell	Narragansett Pier.
406.	George H. McClure	Bristol.
407.	Louis Miller	Saunderstown.
408.	Isaiah F. Mosher	Wickford.
409.	H. M. Gaston	Newport.
410.	John Coffinas	"
411.	Dr. C. Edward Farnum	"
412.	Manoel F. Silvia	"
413.	William E. O'Neill	"

License No.	Name.	Location.
414.	Thomas E. Tew	Prudence Island.
415.	Michael J. Donoghue	Warren.
416.	Erik Gustafson	Tiverton.
417.	Thomas Robertson	Newport.
418.	Leroy C. Wilbour	Little Compton.
419.	Henry Bannister	Peacedale.
420.	Arnold R. Millikin	Block Island.
421.	William Gorden	"
422.	E. A. Larkin	Wakefield.
423.	J. R. Larkin	"
424.	Josephine L. Towle	"
425.	Anest Vatikitocs	Newport.

FISH-TRAPS, SET IN RHODE ISLAND WATERS.

A table giving the number and distribution of the fish-traps in Rhode Island waters for the past fourteen years is given below.

In this table the following arbitrary divisions have been made for the sake of convenience:

I. *Providence River.*—South to a line joining Warwick Point and Popasquash Point.

II. *Greenwich Bay.*—The West Passage south of Providence River division and north of a line drawn east and west, touching the southern part of Hope Island.

III. *West Passage.*—The West Passage south of the Greenwich Bay division, north of a line drawn due west from Beaver Tail and west of a line connecting the south point of Prudence Island and North Point, Conanicut Island.

IV. *Mount Hope Bay.*—North of Railroad Bridge, Tiverton, and a line connecting Bristol Ferry and Mussel Shoal Light.

V. *East Passage.*—South of Providence and Mount Hope Bay divisions and north of a line from Beaver Tail to Brenton's Point.

VI. *Sakonnet River.*—The Sakonnet River south of Railroad Bridge to a line connecting Flint Point and the Breakwater, Sakonnet Point.

VII. *Off Shore.*—Traps south of above divisions and east of Point Judith, not including those off Block Island.

VIII. *Block Island.*—Traps set off this island.

IX. *Watch Hill.*—Traps set along the mainland of Rhode Island, west of Point Judith.

TABLE VI.

Table Showing Number and General Distribution of Fish-Traps Since 1898.

	Providence River.	Greenwich Bay.	West Passage.	Mount Hope Bay.	Sakonnet River.	East Passage.	Off Shore.	Block Island.	Watch Hill.	Total.
1898	4	6	26	9	34	15	25			119
1899	3	10	23	11	35	15	24			121
1900	4	16	24	16	34	12	29			135
1901	7	15	24	13	52	14	26			151
1902	6	22	27	13	52	14	27			161
1903	7	21	32	13	72	16	30			195
1904	6	27	33	7	78	14	40			220
1905	6	26	33	11	82	20	56	6		240
1906	6	35	27	11	80	20	64	6		249
1907	7	37	30	12	87	22	70	6		271
1908	7	38	32	12	87	22	73			271
1909	7	31	32	12	88	26	73	8		277
1910	9	29	26	14	92	20	71	8	14	283
1911	10	30	20	13	93	21	66	10	14	277
1912	10	18	17	12	90	21	68	11	14	261

DEEP WATER FISHING OFF NEWPORT, 1912.

With the exception of scup, which were very abundant, the "run" of fish off Newport in the early summer of 1912 was considerably below the average. Even the "trash-fish"—*i. e.*, fish not marketable except as bait—were few. The majority of the big scup traps, in which the greater part of the fish named below were caught, were set about April 25th.

Scup.—Seven average sized fish from Point Judith on April 24, constituted the first reported catch of scup in Rhode Island waters in 1912. As will be seen from the accompanying table this is two days earlier than last year, but was an average date. One lone fish taken April 25 from the West Passage of Narragansett Bay, and one April 27 from Coddington Cove, made up the early catches of stragglers. May 1st the largest catch had increased to 6 barrels. About this time a severe storm raised havoc with the traps, and when it had calmed down sufficient to haul the traps about May 24, the run of scup had begun. May 15, the shipments were limited to prevent glutting the market. June 7, the run began to slacken and ended about June 10. Some very large fish were caught. One was reported to have weighed 17 pounds and measured 22½ inches.

Mackerel.—The mackerel arrived on the Atlantic Coast in the latter part of April, and as usual, were first located off Chincoteague, Virginia. May 1, the fishing base had worked north to Atlantic City. The first catch in Rhode Island waters consisted of four large ones caught off Newport, May 3. A little over a fortnight later (May 22), the first large shipment from Newport was made. From this on the catches were variable, but wide spread. The best day was June 12.

Tinker Mackerel. The "tinker" mackerel first appeared about June 10.

The first barrel of *butterfish* was taken by John Suza on May 21st.

The earliest catch of *squiteague* was May 13, at Coddington Cove. June 7, the first barrelful was taken and by the middle of June, as high as 8 barrels were taken in a single haul. Only occasional catches were made from this on.

The first catch of *striped bass*, two specimens, was made at Point Judith, April 24. The first barrel lot, off Price's Neck, May 1. On May 9, a tubfull was caught as far up the Bay as Coddington Cove, and on May 8, one weighing 5½ pounds was taken near Bishop's Rock in an eel trap.

April 14, the first *sea robin* was caught in deep water traps off Point Judith. The first one in the Bay was taken April 25.

The very remarkable number of *squid* was a feature of the season's fishing in 1912, as was evidenced by a single haul of 250 barrels from one trap on May 9. May 10 to May 15, many traps were cut to get rid of them, as it was impossible to haul the nets on account of the weight. May 21, they began to leave, but big hauls of them were made later in certain places. June 5, they were running strong in the inshore traps.

The first *bluefish* of the season was caught off 2nd Beach, Newport, on June 15.

The first catch of *swordfish* in this vicinity was made off No Mans Land about June 16.

One large *sturgeon* weighing about 260 pounds was caught on June 20.

The first appearance of various marketable fish for the past eight years is shown in Table XI.

Table VII.

Calendar of Scup Season off Newport, 1905–1912.

	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
First appearance	May 1.	April 20.	May 2.	April 23.	April 19.	April 24.	April 26.	April 24.
Run commences	May 16.	May 1.	May 10.	April 29.	May 1.	May 8.	May 12.	May 1.
Run ends	June 25.	June 15.	June 24.	June 9.	June 14.	June 22.	June 20.	June 10.
Most abundant	June 1 to June 18.	May 5 to June 4.	May 21 to June 10.	April 29 to June 1.	May 10 to June 7.	May 13 to June 5.	May 14 to June 1.	May 14 to June 1.

Tabpe VIII.

Calendar of Mackerel Season off Newport, 1905–1912.

	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
First caught in traps	April 28.	May 4.	May 2.	April 27.	April 17.	April 23.	May 6.	May 3.
First large shipment from Newport	May 14.	May 14.	May 17.	May 14.	May 4.	May 16.	May 27.	May 22.
Most abundant	June 1 to June 19.	June 4 to June 30.	June 11 to July 5.	May 25 to July 1.	May 16 to July 1.	May 16 to July 25.	May 27 to June 21.	May 22 to June 20.
Record day		June 4.	July 1.	June 20.	May 24.	June 10.	May 27.	June 12.
Season ends at Newport	June 28.	Near end of July.	Near end of July.	Near end of July.	Near mid of July.	Near end of July.	Near Aug. 1.	Near end of July.

Table IX.

Appearance of Tinker Mackerel, 1905–1912.

Year.	First Appearance.
1905	June 25.
1906	June 4.
1907	June 10.
1908	May 27.
1909	June 17.
1910	July 1.
1911	July 15.
1912	June 10.

Table X.

Catch of Squiteague in Scup Traps off Newport, 1905–1912.

	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
"Stragglers" first appearance	June 14.	May 4.	May 21.	May 7.	May 19.	April 9.	May 15.	May 13.
Commencement of "run"	June 21.	June 10.	June 20.	June 6.	June 17.	June 20.	June 15.	June 7.

Table XI.

First Appearance of Various Marketable Fish in Traps off Newport, 1905–1912.

	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.
Butterfish	May 22.	April 16.	May 10.	April 28.	April 21.	April 22.	May 2.	May 21.
Horsemackerel				June 25.	June 17.	July 16.	July 15.	
King Fish				May 8.	May 4.	May 4.	May 13.	May 10.
Mackerel	April 28.	May 4.	May 2.	April 27.	April 17.	April 23.	May 6.	May 3.
Sea Bass			May 8.	May 5.	May 4.	May 1.	May 4.	April 30.
Sea Robins		April 30.	May 9.	April 27.	May 1.	April 21.	April 27.	April 24.
Scup	May 1.	April 20.	May 2.	April 23.	April 19.	April 24.	April 26.	April 24.
Squid		May 4.	May 10.	April 27.	May 1.	April 20.	April 28.	May 1.
Squiteague	June 14.	May 4.	May 21.	May 7.	May 19.	April 9.	May 13.	May 13.
Striped Bass		April 31.	May 16.	April 24.	April 21.	April 20.	April 22.	April 24.

ENFORCEMENT OF STATE LAWS.

As heretofore, four deputies were employed to enforce the lobster laws. Two for the entire year, and two additional ones during the open season.

In the enforcement of the laws concerning the fresh-water fisheries, your Commission has employed a number of deputies whose personal interest in the fisheries is strong enough for them to serve without compensation.

The following prosecutions were made and fines imposed and paid under the lobster law (the names of those fined are omitted):*

Newport, May 3, 8 short lobsters	$40 00
Point Judith, May 27, fishing without license	20 00
Point Judith, May 27, fishing without license	20 00
Newport, June 10, fishing without license	20 00
Newport, September 14, fishing without license	20 00
Newport, September 14, fishing without license	20 00
	$140 00

BIOLOGICAL RECORDS.

Physicial and biological records of various kinds have been continued at the Wickford Hatchery and Experiment Station, and will be published in the near future.

AN EXHIBIT OF SEA FARMING.

Under the above heading your Commission has, for a number of years, prepared an exhibit of marine and fresh-water fishes at the Washington County Fair. In view of the large crowds which annually view this exhibit, it was continued last year The expenses of

*In addition to these cases before the courts four licenses were revoked by the Board.

operating this exhibit is borne almost entirely by the Agricultural Society, and inasmuch as it furnishes a means of interesting a large number of people in the fisheries of the State your Commission has readily assented to continue it.

CO-OPERATION WITH FISHERIES AUTHORITIES.

As heretofore in accord with the duties as prescribed by the General Assembly, your Commission has been in close touch with the fisheries boards of various states and abroad. The work of the Commission has continued to attract considerable attention as evidenced by the frequent requests referred to this Commission by the United States Bureau of Fisheries.

In July, Capt. W. B. Clementson, Fishery Officer of the North Eastern Sea Fisheries Committee of England, was sent over from England to study the methods used in this country to propagate lobsters. In his official report he expressed the conclusions he had reached as follows: "After carefully reviewing and considering the different means of hatching as used in the various States, I think the Rhode Island method as in vogue at Wickford, is the best and can be successfully carried out in this country."

Requests for data and descriptions of our methods of lobster propagation have been received from officials in Austria, Canada and Spain.

THE PROPAGATION OF LOBSTERS AT THE WICKFORD EXPERIMENT STATION.

The lobster rearing at Wickford in 1912 was the most successful the station has ever had, not only from the point of the number of lobsters reared to the bottom stages, but also from the number per egg lobster and percentage returns from the fry. The season opened May 24 and closed in the early part of August. The number of lobsters reared to the bottom stages was 521,861. The young lob-

sters were liberated at the following places: East Shore Conanicut Island, West Shore Conanicut Island, Mill Cove (Wickford) Poplar Point, Gould Island, Hope Island, Fox Island, Sakonnet River, Prudence Island and Block Island.

TABLE XII.

Total Number of Fourth and Fifth Stage Lobsters Reared Each Year Since 1900.

YEAR.	IV.	V.
1900	3,425	
1901	8,974	
1902	27,300	
1903	13,500	
1904	50,597	
1905	103,572	
1906	189,384	24,800
1907	294,896	4,900
1908	322,672	5,481
1909	178,542	
1910	511,274	28,372
1911	*291,042	
1912	*521,861	
Total	2,517,039	63,553

*The entire number of lobsters liberated in 1911 and 1912 were in the latter part of the fourth stage and beyond.

TITLES OF SPECIAL PAPERS PUBLISHED IN THE ANNUAL REPORTS OF THE COMMISSIONERS OF INLAND FISHERIES OF THE STATE OF RHODE ISLAND.

1. Mead, A. D. The Starfish. (First paper.) Twenty-eighth Annual Report. 1898.
2. Mead, A. D. The Starfish. (Second paper.) Twenty-ninth Annual Report. 1899.
3. Tower, R. W. Improvements in the Methods of Preparation of Fish for Shipment. Twenty-ninth Annual Report. 1899.
4. Bumpus, H. C. The Extension of the Commercial Fisheries of the State. Twenty-ninth Annual Report. 1899.
5. Kellog, J. L. The Life History of the Common Clam. Twenty-ninth Annual Report. 1899.
6. Mason, N. R. A List of the Diatoms Found in the Water over the Clam, Mussel, and Oyster Beds in Narragansett Bay. Thirtieth Annual Report. 1900.
7. Mead, A. D. Observations on the Soft-shell Clam. Thirtieth Annual Report. 1900.
8. Mead, A. D. Observations on the Soft-shell Clam. (Second paper.) Thirty-first Annual Report. 1901.
9. Risser, J. R. Habits and Life History of the Scallop. Thirty-first Annual Report. 1901.
10. Mead, A. D. Habits and Growth of Young Lobsters and Experiments in Lobster Culture. Thirty-first Annual Report. 1901.
11. Mead, A. D. Observation on the Soft-shell Clam. (Third paper.) Thirty-second Annual Report. 1902.
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14. Mead, A. D. and Barnes, E. W. Observations on the Soft-shell Clam. (Fourth paper.) Thirty-third Annual Report, 1903.
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16. Barnes, E. W. Preliminary Inquiry into the Natural History of the Paddler Crab (Callinectes hastatus) with Remarks on the Soft-shell Crab Industry of Rhode Island. Thirty-fourth Annual Report. 1904.
17. Mead, A. D. Experiments in Lobster Culture. (Fourth paper.) Thirty-fourth Annual Report. 1904.
18. Mead, A. D. Experiments in Lobster Culture. (Fifth paper.) Thirty-fifth Annual Report. 1905.
19. Hadley, P. B. Changes in Form and Color in Successive Stages of the American Lobster. Thirty-fifth Annual Report. 1905.
20. Emmel, V. E. The Regeneration of Lost Parts in the Lobster. Thirty-fifth Annual Report. 1905.
21. Tracy, H. C. A List of the Fishes of Rhode Island. Plates I–XII. Thirty-sixth Annual Report. 1906.
22. Tracy, H. C. The Common Fishes of the Herring Family. Plates VII–XII. Thirty-sixth Annual Report. 1906.

23. Barnes, E. W. Methods of Protecting and Propagating the Lobster, with a Brief Outline of its Natural History. Plates XIII–XXVI and XXVIII, XXXI, XXXII, XXXVI. Thirty-sixth Annual Report. 1906.

24. Hadley, P. B. Regarding the Rate of Growth of the American Lobster. Plates XXVI-XXXVII, and XL. Thirty-sixth Annual Report. 1906.

25. Hadley, P. B. Observations on Some Influences of Light upon the Larval and Early Adolescent Stage of Homarus Americans. Plates XXXVIII–XL. Thirty-sixth Annual Report. 1906.

27. Emmel, V. E. The Relation of Regeneration to the Molting Process in the Lobster. Plates XL–XLI. Thirty-sixth Annual Report. 1906.

28. Tracy, H. C. The Fishes of Rhode Island, III. The Fishes of the Mackerel Family. Thirty-seventh Annual Report, 1907.

29. Tracy, H. C. A List of Rare Fishes taken in Rhode Island in the year 1906. Thirty-seventh Annual Report, 1907.

30. Williams, Dr. Leonard W. List of the Rhode Island Copepoda, Phyllopoda, and Ostracoda, with new species of Copepoda. Thirty-seventh Annual Report. 1907.

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33. Hadley, P. B. Regarding the Behavior of the Larval and Early Adolescent Stages of the American Lobster. Thirty-seventh Annual Report, 1907.

34. Barnes, E. W. Lobster Culture at Wickford, Rhode Island, in 1906. Thirty-seventh Annual Report. 1907.

35. Barnes, E. W. Lobster Culture at Wickford, Rhode Island, in 1907. Thirty-eighth Annual Report. 1908.

36. Tracy, H. C. The Fishes of Rhode Island V. The Flatfishes. Thirty-eighth Annual Report. 1908.

37. Tracy, H. C. The Fishes of Rhode Island VI. A Description of two young Specimens of Squiteague (*Cynoscion re,alis*), with Notes on the Rate of their Growth. Thirty-eighth Annual Report. 1908.

38. Emmel, V. E. The Problem of Feeding in Artificial Lobster Culture. Thirty-eighth Annual Report. 1908.

39. Tracy, H. C. The Fishes of Rhode Island VII. The Life History of the Common Eel. Thirty-ninth Annual Report. 1909.

40. Sullivan, W. E. Notes on the Crabs Found in Narragansett Bay. Thirty-ninth Annual Report. 1909.

41. Mead, A. D. A Method of Fish Culture and of Transporting Live Fishes. Thirty-ninth Annual Report. 1909. (Paper Presented Before the Fourth International Fishery Congress, Washington, 1908.)

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44. Barnes, E. W. Notes on the Spring and Summer Fishing in Deep Water off Newport During the Years 1905–1909. Fortieth Annual Report. 1910.

45. Barnes, E. W. The Plague of Sea Clams at Easton's Beach, Newport. Fortieth Annual Report. 1910.

46. Hadley, P. B. Additional Notes Upon the Development of the Lobster. Fortieth Annual Report. 1910.

47. Barnes, E. W. Revised Edition of Methods of Protecting and Propagating the Lobster, with a Brief Outline of its Natural History. Plates IV–XXIV. Forty-first Annual Report. 1911.

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